



formula 1

said process comprising the steps of:

(a) growing a culture of *Bacillus mycoides* RLJ B-017 bacteria on a growth medium comprising a carbon source selected from the group consisting of sucrose, molasses and pineapple waste for a period of time sufficient to produce the polyhydroxybutyrate of formula 1;

(b) lysing the bacteria in the culture to release the polyhydroxybutyrate of formula 1; and

(c) isolating the polyhydroxybutyrate of formula 1.

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Claim ~~12~~² (new) The process as claimed in claim ~~11~~¹, wherein the culture is grown on the growth medium for a time period equal to or greater than twenty four hours.

Claim ~~13~~³ (new) The process as claimed in claim ~~12~~², wherein the growth medium comprises sucrose.

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Claim ~~14~~¹⁴ (new) The process as claimed in claim ~~12~~¹², wherein said growth medium comprises (g l⁻¹): sucrose, 20; nutrient broth, 8; KH₂PO₄, 1.5; (NH₄)₂SO₄, 2.0; Na₂HPO₄·12H₂O, 2.239; MgSO₄·7H₂O, 0.2; CaCl₂·2H₂O, 0.02; FeSO₄·7H₂O, 0.01; and a trace-element solution, said trace element solution comprising (g l⁻¹): ZnSO₄·7H₂O, 0.2; H₃BO₃, 0.6; MnCl₂·4H₂O, 0.06; CoCl₂·6H₂O, 0.4; CuSO₄·4H₂O, 0.02; NaMoO₄·2H₂O, 0.06; said growth medium having a pH of 7.2.

Claim ~~15~~¹⁵ (new) The process as claimed in claim ~~12~~¹², wherein the growth medium comprises molasses.

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Claim ~~16~~¹⁶ (new) The process as claimed in claim ~~12~~¹², wherein said growth medium comprises (g-l⁻¹): molasses, 20; nutrient broth 8; KH₂PO₄, 1.5; (NH₄)₂SO₄, 2.0; Na₂HPO₄·12H₂O, 2.239; MgSO₄·7H₂O, 0.2; CaCl₂·2H₂O, 0.02; FeSO₄·7H₂O, 0.01; and a trace element solution, said trace element solution comprising (g l⁻¹): ZnSO₄·7H₂O, 0.2; H₃BO₃, 0.6; MnCl₂·4H₂O, 0.06; CoCl₂·6H₂O, 0.4; CuSO₄·4H₂O, 0.02; NaMoO₄·2H₂O, 0.06, said growth medium having a pH of 7.2.

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Claim ~~17~~¹⁷ (new) The process as claimed in claim ~~12~~¹², wherein the growth medium comprises pineapple waste.

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Claim ~~18~~¹⁸ (new) The process as claimed in claim ~~12~~¹², wherein said growth medium comprises (gl⁻¹): pineapple waste, 20; nutrient broth, 8; KH₂PO₄, 1.5; (NH₄)₂SO₄, 2.0;

NaHPO₄.12H₂O, 2.239; MgSO₄.7H₂O, 0.2; CaCl₂.2H₂O, 0.02; FeSO₄.MH₂O, 0.01; and a trace-element solution, said trace element solution comprising (gl⁻¹): ZnSO₄.7H₂O, 0.2; H₃BO₃, 0.6; MnCl₂. 4H₂O, 0.06; CoCl₂. 6H₂O, 0.4; CuSO₄.4H₂O, 0.02; NaMoO₄.2H₂O, 0.06; said growth medium having a pH of 7.2.

Claim ¹~~19~~ (new) The process as claimed in claim ²~~12~~, comprising pelletizing the isolated polyhydroxybutyrate of formula 1 to form a cell pellet and treating the cell pellet with an ionic reagent comprising a dispersion of a metal hypochlorite in a halogenated hydrocarbon solvent to agglomerate the polyhydroxybutyrate of formula 1.

Claims ¹⁰~~20~~ (new) The process as claimed in claim ⁹~~19~~, wherein the metal hypochlorite is selected from the group consisting of sodium hypochlorite and calcium hypochlorite.

Claim ¹¹~~21~~ (new) The process as claimed in claim ⁹~~19~~, wherein the halogenated hydrocarbon solvent comprises chloroform.

Claim ¹²~~22~~ (new) The process as claimed in claim ⁹~~19~~, wherein the concentration of said ionic reagent is in the range of one molar to one millimolar.

Claim ¹³~~23~~ (new) The process as claimed in claim ¹²~~22~~, wherein the polyhydroxybutyrate of formula 1 is isolated by centrifugation to obtain a plurality of separate phases,